AMENDMENTS TO THE CLAIMS

1. (Previously Presented) An intervertebral implant comprising a plug of allogenic bone conforming in size and shape with a portion of the end plates of adjacent vertebrae, wherein the top and bottom surfaces of the implant include a plurality of teeth provided in at least a two dimensional array with the teeth being spaced apart from one another for interlocking with the adjacent vertebrae, and wherein the teeth have a pyramidal shape profile defined by four sides meeting together to form a tip; wherein the sides opposite each other form an acute angle of approximately 60 degrees at the tip.

2. (Original) The implant of claim 1 wherein the implant has an interior space for receiving osteoconductive material to promote the formation of new bone.

3. (Original) The implant of claim 2 wherein the osteoconductive material comprises bone chips.

4. (Canceled).

5. (Original) The implant of claim 1 wherein the implant has a wedge-shaped profile to help restore disc height and spine curvature.

6. (Original) The implant of claim 1 wherein the implant is formed of more than one piece of allogenic bone.

7. (Original) The implant of claim 1 wherein the top and bottom surfaces are curved surfaces.

8. (Original) The implant of claim 1 wherein the teeth are integral with the top and bottom surfaces.

9. (Original) The implant of claim 1 wherein the teeth on the top and bottom surfaces are interrupted to form a channel to receive an insertion instrument for placing the implant.

10. (Original) A method for restoring disc height between adjacent vertebrae having facing endplates, the method comprising:

removing at least a portion of a disc located between the adjacent vertebrae;

distracting an inner space between the facing endplates; and

inserting the implant of claim 1 into the distracted inner space.

11. (Original) The method of claim 10 further comprising measuring a distance between the adjacent vertebrae with a preoperative lateral radiograph to determine an implant height.

12. (Original) The method of claim 10 wherein a distractor is used to distract the inner space.

13. (Original) The method of claim 12 further comprising inserting a trial spacer implant to determine an implant height.

14. (Original) The method of claim 10 wherein the implant further includes an interior space and the method further comprises placing osteoconductive material into the interior space of the implant.

15. (Previously Presented) An implant for restoring disc height between adjacent vertebrae having facing endplates comprising an annular plug of allogenic bone surrounding an interior space, the plug having top and bottom surfaces configured and adapted in use to face the endplates of adjacent vertebrae, wherein the top and bottom surfaces include a plurality of teeth provided in at least a two dimensional array, and wherein the teeth have a pyramidal shape defined by four sides meeting together to form a tip; wherein the sides opposite each other form an acute angle of approximately 60 degrees at the tip.

16. (Canceled)

17. (Previously Presented) The implant of claim 15 wherein the implant has a wedge-shaped profile to help restore disc height and spine curvature.

18. (Original) The implant of claim 17 wherein the top and bottom surfaces are curved surfaces.

19. (Previously Presented) The implant of claim 15 wherein the teeth are integral with the top and bottom surfaces.

20. (Original) The implant of claim 15 wherein the implant is formed of more than one piece of allogenic bone.

21. (Previously Presented) An intervertebral implant comprising at least one piece of allogenic bone provided with a hollow interior space, the implant having top and bottom surfaces configured and adapted in use to face the end plates of adjacent vertebrae, wherein the top and bottom surfaces include a plurality of teeth provided in a plurality of adjacent rows, and wherein at least a portion of the teeth have a pyramidal shape defined by four sides meeting together to form a tip; wherein the sides opposite each other form an acute angle at the tip; the implant further comprising a pair of parallel channels extending along the entire length of the implant, the channels being substantially smooth, devoid of teeth, and being adapted and configured to receive a single surgical instrument.

22. (Previously Presented) The implant of claim 21, wherein the top and bottom surfaces each have an opening communicating with the hollow interior space.

23. (Previously Presented) The implant of claim 21, wherein the interior space and openings form a substantially cylindrical chamber.

24. (Cancelled)

25. (Previously Presented) The implant of claim 21, wherein the angle is approximately 60°.

26. (Previously Presented) The implant of claim 21, wherein the implant is substantially symmetrical about a mid-plane of the implant.

27. (Previously Presented) The implant of claim 26, wherein the implant has a wedge shaped profile such that the top surface is inclined with respect to the bottom surface.

28. (Previously Presented) The implant of claim 27, wherein the angle of inclination between the top surface and the midplane is between about 4.2° and about 15°.

29. (Previously Presented) The implant of claim 28, wherein the top and bottom surfaces are substantially flat planar surfaces.

30. (Previously Presented) The implant of claim 28, wherein the top and bottom surfaces are curved surfaces.

31. (Previously Presented) The implant of claim 21, wherein the implant has first and second sides and a gradual decrease in height from the first side to the second side.

32. (Previously Presented) The implant of claim 21, wherein the implant has at least one rounded edge between the top and bottom surfaces to facilitate insertion of the implant.

33. (Canceled)

34. (Canceled)

35. (Canceled)

36. (Canceled)

37. (Previously Presented) The implant of claim 21, further comprising at least two lateral sides wherein the channels are formed in the two lateral sides.

38. (Previously Presented) The implant of claim 21, wherein the implant is formed of more than one piece of bone.

39. (Previously Presented) The implant of claim 38, wherein the pieces of bone are arranged side by side and the top and bottom surfaces are formed of more than one piece of bone.

40. (Previously Presented) The implant of claim 21, wherein the teeth are arranged to cover substantially the entire top and bottom surfaces.

41. (Currently Amended) An intervertebral implant formed of at least one piece of allogenic bone provided with a hollow substantially cylindrical interior space, the implant comprising: a mid-plane about which the implant is substantially symmetrical;

top and bottom surfaces configured and adapted in use to face the end plates of adjacent vertebrae, the top and bottom surface each having an opening communicating with the substantially cylindrical space, and the top surface being inclined in a range between about 4.2° and about 15° with respect to the mid-plane;

at least two substantially smooth parallel channels adapted and configured to receive a surgical instrument; and

at least one rounded edge between the top and bottom surfaces to facilitate insertion of the implant;

wherein the top and bottom surfaces comprise a plurality of teeth provided in a plurality of adjacent rows, and further wherein the teeth are defined by four sides, at least

three of the sides forming an acute angle with respect to the respective top and bottom surfaces.

42. (Previously Presented) The implant of claim 41, wherein the top and bottom surfaces are substantially flat planar surfaces.

43. (Previously Presented) The implant of claim 41, wherein the top and bottom surfaces are substantially flat in a first direction and curved in a second direction.

44. (Previously Presented) The implant of claim 41 formed of more than one piece of allogenic bone arranged side by side and adapted and configured such that the top and bottom surfaces are formed of more than one piece of bone.

45. (Previously Presented) The implant of claim 41, wherein the top and bottom surfaces are curved.

46. (Currently Amended) An intervertebral implant comprising a plug of allogenic bone conforming in size and shape with a portion of the end plates of adjacent vertebrae, wherein the top and bottom surfaces of the implant include a plurality of teeth provided in at least a two dimensional array with the teeth being spaced apart from one another for interlocking with the adjacent vertebrae, and wherein the teeth have a pyramidal shape profile defined by four sides forming an acute angle with respect to the respective top and bottom surfaces of the implant;

wherein the implant has a wedge-shaped profile such that the top surface is inclined with respect to the bottom surface at an angle of inclination of between about 4.2° and about 15° to help restore disc height and spine curvature.

47. (Previously Presented) An intervertebral implant comprising a plug of allogenic bone conforming in size and shape with a portion of the end plates of adjacent vertebrae, wherein the top and bottom surfaces of the implant include a plurality of teeth provided in at least a two dimensional array with the teeth being spaced apart from one another for interlocking with the adjacent vertebrae, and wherein the teeth have a pyramidal shape profile defined by four sides forming an acute angle with respect to the respective top and bottom surfaces of the implant;

wherein the implant is formed of more than one piece of allogenic bone.

48. (Previously Presented) The implant of claim 47, wherein the implant is formed of at least two pieces of bone and at least two pieces are connected by pins.

49. (Previously Presented) The implant of claim 48, wherein the pieces of bone are arranged side by side and the top and bottom surfaces are formed of more than one piece of bone.

50. (Previously Presented) An intervertebral implant comprising a plug of allogenic bone conforming in size and shape with a portion of the end plates of adjacent vertebrae, wherein the top and bottom surfaces of the implant include a plurality of teeth provided in at least a two dimensional array with the teeth being spaced apart from one another for interlocking with the adjacent vertebrae, and wherein the teeth have a pyramidal shape profile defined by four sides forming an acute angle with respect to the respective top and bottom surfaces of the implant;

wherein the top and bottom surfaces are curved surfaces.

51. (Previously Presented) A method for restoring disc height between adjacent vertebrae having facing endplates, the method comprising:

measuring a distance between the adjacent vertebrae with a preoperative lateral radiograph to determine an implant height;

removing at least a portion of a disc located between the adjacent vertebrae;

distracting an inner space between the facing endplates; and

inserting an intervertebral implant into the distracted inner space, the implant comprising a plug of allogenic bone conforming in size and shape with a portion of the end plates of adjacent vertebrae, wherein the top and bottom surfaces of the implant include a plurality of teeth provided in at least a two dimensional array with the teeth being spaced apart from one another for interlocking with the adjacent vertebrae, and wherein the teeth have a pyramidal shape profile defined by four sides forming an acute angle with respect to the respective top and bottom surfaces of the implant.

52. (Previously Presented) An implant for restoring disc height between adjacent vertebrae having facing endplates comprising an annular plug of allogenic bone surrounding an interior space, the plug having top and bottom surfaces configured and adapted in use to face the endplates of adjacent vertebrae, wherein the top and bottom surfaces include a plurality of teeth provided in at least a two dimensional array, and wherein the teeth have a

pyramidal shape defined by four sides forming an acute angle with respect to the respective top and bottom surfaces of the implant;

wherein the implant is formed of more than one piece of allogenic bone.

53. (Previously Presented) An intervertebral implant comprising at least one piece of allogenic bone provided with a hollow interior space, the implant having top and bottom surfaces configured and adapted in use to face the end plates of adjacent vertebrae, wherein the top and bottom surfaces include a plurality of teeth provided in a plurality of adjacent rows, and wherein at least a portion of the teeth have a pyramidal shape defined by four sides forming an acute angle with respect to the respective top and bottom surfaces of the implant;

wherein:

the implant is substantially symmetrical about a mid-plane of the implant; and

the implant has a wedge shaped profile such that the top surface is inclined with respect to the bottom surface, an angle of inclination between the top surface and the midplane is between about 4.2° and about 15°.

54. (Canceled)

55. (Previously Presented) The implant of claim 53, wherein the top and bottom surfaces are substantially flat planar surfaces.

56. (Previously Presented) The implant of claim 53, wherein the top and bottom surfaces are curved surfaces.

57. (Previously Presented) An intervertebral implant comprising at least one piece of allogenic bone provided with a hollow interior space, the implant having top and bottom surfaces configured and adapted in use to face the end plates of adjacent vertebrae, wherein the top and bottom surfaces include a plurality of teeth provided in a plurality of adjacent rows, and wherein at least a portion of the teeth have a pyramidal shape defined by four sides meeting together to form a tip; wherein the sides opposite each other form an acute angle of approximately 60° at the tip;

wherein the implant has first and second sides and a gradual decrease in height from the first side to the second side.

58. (Previously Presented) An intervertebral implant comprising at least one piece of allogenic bone provided with a hollow interior space, the implant having top and bottom surfaces configured and adapted in use to face the end plates of adjacent vertebrae, wherein

the top and bottom surfaces include a plurality of teeth provided in a plurality of adjacent rows, and wherein at least a portion of the teeth have a pyramidal shape defined by four sides meeting together to form a tip; wherein the sides opposite each other form an acute angle of approximately 60° at the tip;

wherein the implant has at least one rounded edge between the top and bottom surfaces to facilitate insertion of the implant.

59. (Previously Presented) An intervertebral implant comprising:

at least one piece of allogenic bone provided with a hollow interior space, the implant having top and bottom surfaces configured and adapted in use to face the end plates of adjacent vertebrae; and

a pair of parallel channels adapted and configured to receive a single surgical instrument;

wherein:

the top and bottom surfaces include a plurality of teeth provided in a plurality of adjacent rows, and wherein at least a portion of the teeth have a pyramidal shape defined by four sides forming an acute angle with respect to the respective top and bottom surfaces of the implant; and

at least one channel extends along the entire length of the implant and is substantially devoid of teeth.

60. (Previously Presented) The implant of claim 59, further comprising at least two lateral sides wherein the channels are formed in the two lateral sides.

61. (Previously Presented) An intervertebral implant comprising at least one piece of allogenic bone provided with a hollow interior space, the implant having top and bottom surfaces configured and adapted in use to face the end plates of adjacent vertebrae, wherein the top and bottom surfaces include a plurality of teeth provided in a plurality of adjacent rows, and wherein at least a portion of the teeth have a pyramidal shape defined by four sides forming an acute angle with respect to the respective top and bottom surfaces of the implant;

wherein the implant is formed of more than one piece of bone.

62. (Previously Presented) The implant of claim 61, wherein the implant is formed of at least two pieces of bone and at least two pieces are connected by pins.

63. (Previously Presented) The implant of claim 62, wherein the pieces of bone are arranged side by side and the top and bottom surfaces are formed of more than one piece of bone.

64. (Previously Presented) An implant for restoring disc height between adjacent vertebrae having facing endplates comprising an annular plug of allogenic bone surrounding an interior space, the plug having top and bottom surfaces configured and adapted in use to face the endplates of adjacent vertebrae, wherein the top and bottom surfaces include a plurality of teeth provided in at least a two dimensional array, and wherein the teeth have a pyramidal shape defined by four sides forming an acute angle with respect to the respective top and bottom surfaces of the implant;

wherein:

the angle formed from the tip of the teeth to a base where the sides meet with the respective top and bottom surfaces is approximately 60 degrees; and

the implant has a wedge-shaped profile to help restore disc height and spine curvature.

65. (Previously Presented) The implant of claim 64 wherein the top and bottom surfaces are curved surfaces.

66. (Previously Presented) An intervertebral implant comprising at least one piece of allogenic bone provided with a hollow interior space, the implant having top and bottom surfaces configured and adapted in use to face the end plates of adjacent vertebrae, wherein the top and bottom surfaces include a plurality of teeth provided in a plurality of adjacent rows, and wherein at least a portion of the teeth have a pyramidal shape defined by four sides forming an acute angle with respect to the respective top and bottom surfaces of the implant;

wherein the angle formed from the tip of the pyramidal teeth to a base where the sides meet with the respective top and bottom surfaces is approximately 60°.

67. (Cancelled).